

Appl. 10/077,391
Amdt. dated 09 November 2004
Reply to Office Actions of 28 May and 28 October 2004

REMARKS

Applicants wish to thank the Examiner for the benefit of the interview on May 21, 2004. The interview was particularly helpful in allowing the applicants' counsel to understand the Examiner's concerns, particularly with regard to Strezov et al. U.S. Patent No. 5,701,948. As the Examiner noted in the Interview Summary: "Applicant's argument regarding to the random dimples is convinced and the non-final rejection is withdrawn." Therefore, the pending claims should be allowed.

Applicants particularly note the following: Claims 1-5 and 8-10 are rejected under § 102(b) as anticipated by Strezov '948. The '948 patent discloses a casting roll surface textured by paralleled grooves and ridges defining V shaped grooves and ridges with sharp edges. The Office Action states that "Strezov et al also discloses wherein the texture has surface distribution between 5 and 100 peaks per mm² and an average height of at least 10 microns to 20 microns (Col. 3, ll. 7-12), where the texture is randomly distributed, since Strezov et al discloses the average distribution." However, the '948 patent at col. 3, ll. 7-10 states as follows:

"For optimum results it is preferred that the depth of the texture is in the range 15 to 25 microns and the pitch is between 150 and 200 microns. Optimum results have been achieved with rolls in which the depth of the texture is 20 microns and the pitch between adjacent grooves is 80 microns."

The Office Action states that Strezov et al discloses "the average distribution," but the reference does not use that term. The '948 patent discloses casting rolls with a regular pattern of grooves and ridges in a specific size range. More importantly, the statement of the dimensions of a regular pattern of ridges and grooves for "optimum results" does not translate into a random distribution as called for by the presently claimed subject matter.

Claims 6 and 7 are rejected under § 103 for obviousness over Strezov et al in view of Irie '084. It is quite unclear what is relevant to the present claims in the disclosure of the '084 patent. The '084 claims a method of producing cold rolled sheet steel having a notably excellent formability of a particular composition, hot rolling the steel at a total reduction of not less than 90%, finish rolling the steel at a rolling speed of not less than 40 meters per minute and finishing temperature of not lower than 830°C, coiling the hot rolled strip at a temperature of 600-800°C, cold rolling the coiled strip to obtain a cold rolled strip having final gauge and then continuously annealing the cold rolled strip within the

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temperature range of 700-900°C for ten seconds, five minutes. The '084 patent does not appear to have any relevance to textures on casting roll surfaces in strip casting.

Claims 11-19 are rejected under § 103 over Strezov et al '948 in view of Irie '084 in view of JP '751. JP '751 is apparently cited because it discloses utilizing shot blasting to form an inner layer 9 to provide good hot transmission properties between the outer layer 13 and the inner layer 9. Translation at 5, ll. 15-17¹. The method of forming the outer layer 13 is not specified, and the outer layer 13 can be readily formed of Ni-plating or Cr-plating or Ni+Cr-plating. The inner layer 9 is polished the surface after the completion of the plating. *Id.* at ll. 4-8. In any case, JP '751 teaches that "the outer surface of the outer layer 13 is finished smoothly, the degree of smoothness is preferably for example, the same as the level of smoothness of a normal cold rolling mill." *Id.* at ll. 9-11 (emphasis added).

JP '751 therefore teaches directly contrary to claim 11-19 which directs that the randomly distributed pattern of discrete peaks is formed by grit blasting and than covered by a protective coating "such that the casting surface shows the random distribution texture of discrete projections."

The Office Action states that it would be obvious "to provide shot blasting or electroplating method and covered by a protective coating as taught by JP '751, in Strezov et al and Irie et al because a smooth surface on the slab is necessary as the final product." This statement is a *non-sequitur* as it relates to claims 11-19 where there is random distribution of discrete projections in the presently claimed subject matter with a protective coating such that the casting surface shows the random distribution texture of the discrete projections.

Claims 20-21 are rejected under § 103 for obviousness over Strezov et al '948 in view of Irie et al '084 in view of JP '751 in view of JP '547. This rejection is traversed for all the reasons noted above. JP '547 is remote prior art. It is directed to the inner mold of a continuous slab casting machine where the inner surface of the mold is formed of cobalt-molybdenum-copper alloy. There is no disclosure or suggestion of utilizing a nickel-chromium-molybdenum alloy layer to form the mold surface as taught by claims 20 and 21.

As the Examiner indicated at the interview on May 21, 2004, applicants respectfully submit that pending claims 1-21 are in condition for allowance, and should be allowed. If the Examiner has any further questions or concerns, applicant respectfully

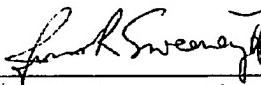
¹ A copy of the translation of JP '751 is attached hereto

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requests that the Examiner telephone applicants' counsel, Arland T. Stein, Esq., at (317) 231-7390 or Jim Sweeney at 231-7771.

Respectfully,

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INDS02 JRS 690101v1

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